

3726



404-035

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: Gilbert W. Younger : Examiner: Marc Jimenez
Title: Method And Systems For Improving : Group Art Unit: 3726
The Operation Of Transmissions :
For Motor Vehicles :
Serial No. 10/081,605 :
Filed: February 21, 2002 :

Commissioner for Patents
P.O. Box 1450
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REQUEST FOR RECONSIDERATION

Applicant respectfully requests reconsideration of the rejection of Claims 1 - 20 in the Official Action dated February 10, 2004 for the above identified patent application.

At page 2, paragraph 1 of the Official Action, the Examiner has requested Applicant to submit a copy of the publication entitled 4R100 Transmission Theory And Operation, referred to and discussed in the Specification of the present patent application. As discussed in the Specification, this publication describes the structure and operation of the "factory installed" 4R100

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automotive transmission. The claims pending in the present application are directed to methods for modifying the 4R100 "factory installed" transmission to improve the efficiency and operation thereof.

Enclosed is a copy of the aforementioned publication. Applicant respectfully requests that it be formally cited of record in connection with the present patent application as generally illustrating the background state of the art.

At page 2, paragraph 3 of the Official Action, pending Claims 1 - 20 have been rejected under 35 U.S.C. Section 103(a) as being obvious over Applicant's admitted prior art in view of the Younger patent (U.S. Patent No. 5,743,823). The admitted prior art is identified in the Official Action as pages 8 - 11 of Applicant's specification and Figs. 1 - 2 of the drawing which describe and illustrate the 4R100 "factory installed" automotive transmission. As noted above, the pending claims are directed to methods of modifying the "factory installed" transmission to improve the operation thereof.

For the reasons to be discussed below, Applicant respectfully submits that there is clearly no teaching or suggestion to combine the Younger patent with the admitted prior art in any manner rendering the claims obvious. Moreover, assuming arguendo that the Younger patent can properly be combined with the admitted prior art, there is clearly no

disclosure in the Younger patent itself suggesting the modifications to the "factory installed" transmission as expressly defined by the pending claims.

Referring to page 3, second paragraph of the Official Action, the Examiner concedes that the admitted prior art does not teach:

"...modifying the automotive transmission including removing the valve opposing the upward movement of the torque converter control valve, removing the return spring, replacing the return spring with another spring having a greater coefficient of tension, replacing the existing control valve with another control valve having upper and lower lands of substantially equal diameter, and modifying the exhaust opening by replacing the valve bore with a replacement valve bore."

The Official Action continues, at page 3, last paragraph, by stating:

"Younger teaches that it is known to modify an existing automotive transmission by modifying the automotive transmission (col. 2, lines 18 - 23) including removing the valve opposing the upward movement of the torque converter control valve (col. 4, lines 2 - 3), removing the return spring (col. 4, line 8), replacing the return spring with another spring having greater coefficient of tension (col. 4, line 8) replacing the existing control valve with another control valve (col. 4, line 4), having upper and lower lands of substantially equal diameter (it is inherent that valves come with lands of equal diameter), and modifying the exhaust opening by replacing the valve bore with a replacement valve bore (col. 4, lines 6 - 7).

The Official Action then concludes, at page 4, first and second paragraphs, that it would be obvious to combine the teachings of the Younger patent with the admitted prior art to result in the methods defined by the pending claims. Applicant respectfully disagrees with this conclusion for the reasons to be discussed as follows.

Pending Claims 1 - 6 are directed to a method of modifying the hydraulic circuitry of an automotive transmission. Claim 1 expressly recites the step of "removing said valve opposing said upward movement of said torque converter control valve"; Claim 2 recites the steps of "removing said return spring opposing upward movement of said torque converter control valve; and replacing said return spring with another return spring having a greater coefficient of tension"; Claim 3 recites the step of "replacing said torque converter control valve with another torque converter control valve having upper and lower lands of substantially equal diameter"; Claim 4 expressly recites the step of "modifying said exhaust to restrict fluid flow through said opening of said exhaust"; Claim 5 expressly recites the steps of "replacing said valve bore with a replacement valve bore, and defining an opening in said replacement valve bore, said opening having a diameter smaller than said predetermined diameter of said opening of said exhaust, said opening in said replacement bore being, at least in part, in axial alignment with said opening of said exhaust to restrict fluid flow through said exhaust"; and Claim 6 recites the step of "modifying the size of said opening defined in said

replacement bore for adjusting the flow of fluid through said opening of said exhaust".

Claims 7 - 12 correspond to Claims 1 - 6, and include the same limitations discussed above with respect to Claims 1 - 6. The difference between Claims 1 - 6 and 7 - 12 is that Claims 7 - 12 are directed specifically to modification of a 4R100 automotive transmission.

Claim 13 is directed to a method of modifying the hydraulic circuitry of an automotive transmission and expressly recites the steps of "removing said return spring opposing upward movement of said torque converter control valve; and replacing said return spring with another return spring having a greater coefficient of tension". Claim 14, which is specifically directed to the modification of a 4R100 automotive transmission, contains the same limitations discussed above with respect to Claim 13.

Claim 15 is directed to a method of modifying the hydraulic circuitry of an automotive transmission including the step of "replacing said torque converter control valve with a replacement torque converter control valve having upper and lower lands of substantially equal diameter". Claim 16, which is specifically directed to a method of modifying the hydraulic circuitry of a 4R100 automotive transmission, contains the same limitations as Claim 15.

Claim 17 is directed to a method of modifying the hydraulic circuitry of an automotive transmission including the step of "replacing said valve bore with a replacement valve bore having an opening defined therein; said opening being of a small diameter than said predetermined diameter of said opening of said exhaust; at least a portion of said smaller opening in said replacement valve bore being in axial alignment with said opening of said exhaust to restrict the flow of fluid between said valve bore and said exhaust". Claim 18 is directed to a method including the step of "modifying the size of said opening in said replacement valve bore to adjust the fluid flow between said valve bore and said exhaust".

Claims 19 - 20, which are specifically directed to a method of modifying the hydraulic circuitry of a 4R100 automotive transmission, include the same limitations in Claims 17 - 18 as discussed above.

It is apparent from the above discussion that each of Claims 1 - 20 defines a method and positively recites specific steps for implementing the method. As will now be seen from a comparison of the specific method steps recited in the claim and the specific portions of the applied Younger patent relied upon to reject the claims, there is clearly no suggestion in the disclosure of the applied Younger patent to modify the admitted prior art (i.e., the factory installed transmission) in any manner rendering Claims 1 - 20 obvious.

Column 2, lines 18 - 23 of the Younger patent states:

"It is also desireable to modify the "factory installed" automotive transmission to result in a quick application during upshifts and quick release forces during downshifts with minimum ratio sharing (overlap) during gear changes, for improved performance particularly when the vehicle is in heavy duty use".

The last paragraph of page 3 of the Official Action relies upon the disclosure of the Younger patent at Column 4, lines 1 - 8 in support of the rejection of Claims 1 - 20. This portion of the Younger patent states:

"[The modifications to the] original operation and hydraulic circuitry of the "factory installed" automotive transmissions are made by removing structure including original valves, adding structure including new valves, adding new hydraulic circuits to the overall circuitry, discontinuing use of existing circuits by plugging; and modifying the flow through existing hydraulic circuitry by enlarging or reducing the size of the fluid flow orifices and adjusting existing spring and pressure values".

The Official Action also relies at page 4, first paragraph, last line, on the Abstract, lines 1 - 4 of the Younger patent which states:

"Method and systems are provided for improving the operation of a transmission for an automotive vehicle, and in particular the transmission as installed by the original automobile manufacturer...".

It is apparent from each of the sections of the Younger patent quoted above, that the portions of the Younger patent relied upon in the Official Action to reject Claims 1 - 20 are statements of generality which do not teach or suggest the

specific method steps expressly recited and defined in each of Claims 1 - 20. Although the statements relied upon from the Younger patent in the Official Action generally describe removing and replacing springs and valves in a factory installed automotive transmission, none of this disclosure teaches or suggests:

1. the step of removing a valve opposing upward movement of a torque converter control valve, as expressly recited in independent Claims 1 and 7;

2. removing the return spring opposing upward movement of the torque converter control valve, and replacing the return spring with another return spring having a greater coefficient of tension, as expressly recited in Claims 2 and 8;

3. the step of replacing a torque converter control valve with another torque converter control valve having upper and lower lands of substantially equal diameter, as expressly recited in Claims 3 and 9;

4. the step of modifying an exhaust to restrict fluid flow through the opening of an exhaust, as expressly recited in Claims 4 and 10;

5. the steps of replacing a valve bore with a replacement valve bore, and defining an opening in the replacement valve

bore, said opening having a diameter smaller than a predetermined diameter in the opening of an exhaust, the opening in the replacement bore being, at least in part, in axial alignment with the opening of said exhaust to restrict fluid flow through the exhaust, as expressly recited in Claims 5 and 11;

6. the step of modifying the size of the opening defined in the replacement bore for adjusting the flow of fluid through the opening of the exhaust, as expressly recited in Claims 6 and 12;

7. the step of removing a return spring opposing upward movement of a torque converter control valve, and replacing the return spring with another return spring having a greater coefficient of tension, as expressly recited in Claims 13 and 14;

8. the step of replacing a torque converter control valve with a replacement torque converter control valve having upper and lower lands of substantially equal diameter, as expressly recited in Claims 15 and 16;

9. the step of replacing the valve bore with a replacement valve bore having an opening defined therein; the opening being of a smaller diameter than a predetermined diameter of an opening in the exhaust; at least a portion of the smaller opening in the replacement valve bore being in axial alignment with the opening of the exhaust to restrict the flow of fluid between the valve

bore and the exhaust, as expressly recited in Claims 17 and 19;
and

10. the step of modifying the size of the opening in the replacement valve bore to adjust the fluid flow between the valve bore and the exhaust, as expressly recited in Claims 18 and 20.

Applicant further notes that in the Official Action, the Examiner states that: "it is inherent that valves come with lands of equal diameter" (See page 3, last paragraph of the Official Action). This statement was made with reference to the limitations in Applicant's claims reciting the step of replacing the factory installed torque converter control valve with a replacement torque converter control valve "having upper and lower lands of substantially equal diameter" (Claims 3, 9, 15, 16). Applicant respectfully disagrees with the Examiner's conclusion regarding the diameters of the lands of a valve. Attention is respectfully invited to page 14, first paragraph of Applicant's specification which states, in pertinent part:

"...In valve 2 of the "factory installed" transmission, the upper and lower lands are of differing diameters to assist upward movement of the valve. Although the elimination of the differential in the diameters of the upper and lower lands of the replacement valve 28 will, to a limited extent, impede upward movement of the valve, this is necessary to compensate for the removal of the "factory installed" balance valve opposing upward movement of the "factory installed" torque converter control valve 2. The elimination of the differential in diameter of the upper and lower lands of the replacement torque converter control valve 28 in the modified transmission tends to stabilize the valve 28 during its upward movement, and prevents the valve

28 from moving upward too rapidly, or moving upwardly even in the absence of a command signal from the electronic solenoid control."

Applicant therefore submits that the statement in the Official Action that all valves inherently have upper lower lands of equal diameter is incorrect. On the contrary, modification of the original land diameter of the factory installed valve is one of the improvements of Applicant's invention.

It is axiomatic that in determining the patentability of a claim, the claim must be considered as a whole, and that all positively recited recitations must be considered in the patentability determination. Moreover, references cannot be combined to reject a claim unless there is a suggestion or motivation in the prior art itself to make the combination. See for example, Micro-Chemical, Inc. v. Great Plains Chemical Co., Inc., 41 USPQ 2d 1238 (Fed. Cir. 1997); and In re Fritch, 23 USPQ 2d 1780 (Fed. Cir. 1992). Moreover, it is improper to selectively combine different portions of different prior art references, using Applicant's own disclosure as a guide for the combination. Orthopedic Equipment Co. v. United States, 217 USPQ 193 (Fed. Cir. 1983), and In re Fritch, supra. The validity of a claim is determined by considering the claim as a whole, and not by considering whether or not each element of the claim existed in the prior art. The claimed invention must be considered as a whole without the benefit of hindsight, and the claims must be considered in their entirety. Casting an invention as a

combination of old elements leads improperly to an analysis of the claimed invention by the parts, and not the whole. See, for example, Custom Accessories, Inc. v. Jeffrey-Allan Industries, Inc., 1 USPQ 2d 1196 (Fed. Cir. 1986); Hartness International, Inc. v. Simplimatic Engineering Co., 2 USPQ 2d 1826 (Fed. Cir. 1987); Rockwell International Corp. v. United States, 47 USPQ 2d 1027 (Fed. Cir. 1998).

In the instant case, Applicant's admitted prior art represents the "factory installed" automotive transmission, the starting point for Applicant's claimed invention. The disclosure in the Younger patent relied upon in the Official Action is nothing more than general statements regarding the replacements of valves, springs and other general modifications to "factory installed" automotive transmissions. There is clearly no disclosure in the Younger patent teaching or suggesting the specific modifications to the "factory installed" transmissions as specifically discussed at pages 11 - 16 of Applicant's specification, and as specifically recited in each of the methods defined by pending Claims 1 - 20. Assuming arguendo that the general disclosure of the Younger patent relied upon in the Official Action could be combined with the admitted prior art (i.e., the "factory installed" automotive transmission) discussed in Applicant's specification and illustrated in Applicant's drawings, there is clearly no suggestion or motivation in the prior art itself to implement the specific modifications to the "factory installed" automotive transmission as expressly defined

by independent Claims 1 - 20. The only manner by which the general disclosure of the Younger patent could be modified/combined with the admitted prior art to result in the specific methods defined by the pending claims would be by using the specific disclosure in Applicant's specification as a guide for modifying/combining the "factory installed" automotive transmission and the Younger patent to result in a hindsight reconstruction of the pending claims based upon Applicant's own disclosure. However, as noted above, it is well established that hindsight reconstruction of the claims using an Applicant's own disclosure as a guide for combining/modifying the references to result in the claims is an inappropriate basis for rejection of the claims.

* * *

In conclusion, the general disclosure of the Younger patent does not teach or suggest modification to the operation of the "factory installed" automotive transmission (the admitted prior art) in any manner which would render the specific methods defined by independent Claims 1 obvious.

* * *

For the reasons discussed herein, Applicant respectfully submits that all claims are allowable over the prior art applied

in the Official Action, and favorable action is respectfully requested.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Mark P. Stone".

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